

MEASURING SCHOOL AND COLLEGE ENROLLMENT: A COMPARISON  
OF CENSUS BUREAU AND OFFICE OF EDUCATION DATA

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The data on school and college enrollment collected by the Bureau of the Census in the 1970 Census are generally comparable with the data collected by the Bureau in the October 1969 Current Population Survey (CPS) and with the data collected in the fall of 1969 by the Office of Education (OE). These three series of data on school and college enrollment are collected for different purposes and present different geographic detail and different characteristics concerning the student population, but they do have similar rim totals on the numbers in elementary school, high school, and college. The Census data present information on the demographic, social, and economic characteristics of the enrolled and not enrolled population for State and local areas once every 10 years. The CPS data present annual National information on the demographic and socioeconomic characteristics of the enrolled and not enrolled population collected in the household. The OE data present information on the characteristics of the schools, teachers, and school finance, as well as some student characteristics, collected from the institutions themselves or from State and local officials.

Although generally comparable, there are some interesting differences among the three series of data. Most of the diversity among the data appears to be due to the differing collection dates, methods, and definition of terms. The Current Population Survey data were collected during the first semester of school (October 1969) as were the Office of Education data while the Census data were collected during the second semester of school (April 1970). The fall and spring collection dates caused differences in level of enrollment (primarily because of attrition between the first and second semester) and differences in enrollment rates by age. The 1970 Census data were collected from a 15 percent sample of the Nation's population by both enumerators and self-response. The CPS data were collected from a sample of 50,000 households by direction enumeration of any qualified respondent. The Office of Education data were collected from a virtually complete enumeration of institutions or State and local officials.

#### Level of School

1970 Census and 1969 CPS.--Overall the number of students 3 to 34 years old, enrolled in school in the Census for April 1970 was 2 percent smaller than the number in the CPS of October 1969 (Table 1). Attrition between semesters probably accounts for some of this difference in total enrollment. The number of persons 3 to 34 years old who were not enrolled in school in the Census was 9 percent larger than the number in the CPS. The universe dissimilarity between the Census and the CPS probably accounts for this difference since the Census universe included the total resident population but the CPS was

restricted to the civilian noninstitutional population.

At the nursery school level, the number of pupils enrolled was 11 percent larger in the Census (spring) than in the CPS (fall). This increase is contrary to the attrition hypothesis. However, since nursery school enrollment is increasing, and since nursery school enrollment does not necessarily have to begin in the fall, this increase might be reasonable. At the kindergarten level, the number of pupils enrolled was 8 percent smaller in the Census than in the CPS. Since some attrition is not unexpected, and since kindergarten enrollment is not compulsory in all States, this decrease might not be unreasonable. At the elementary school level, there were 2 percent fewer pupils enrolled in the Census than in the CPS; at the high school level, there were 0.5 percent fewer students enrolled in the Census than in the CPS; and at the college level, there were 6 percent fewer students enrolled in the Census than in the CPS.

Census and Office of Education. At the elementary and high school levels there were 4 percent fewer enrolled in the Census than in the Office of Education figures for the fall of 1968 (OE collected data on only public school enrollment below the college level in 1969), and at the college level there were 7 percent fewer enrolled in the Census than in the OE data for the fall of 1969.

CPS and Office of Education. The CPS and OE estimates of total degree-credit college enrollment in the fall of 1969 were quite similar (table 3). The CPS estimate was less than 1 percent smaller than the OE figure--not a statistically significant difference because of a sampling error of about 120,000 in the Current Population Survey. However, there were differences by level of college. The CPS estimate of undergraduate enrollment was 6 percent lower than the OE estimate. And the CPS estimate of graduate enrollment was 27 percent higher than the OE figure. The larger number of graduate students in the CPS was somewhat surprising, since the CPS universe has an upper age limit of 34 years whereas the OE universe has no upper age limit. This finding suggests that there may be some overreporting of enrollment in the fifth year of college or more in the CPS.

Office of Education and CPS estimates of college enrollment are shown in table 3 for each year from 1960 to 1970. In all but three years the OE total degree-credit college enrollment level was higher than the CPS estimate of college enrollment of 14 to 34 year olds. The yearly variations in enrollment are greater in the CPS than the OE figures probably because the CPS is more influenced by changes in enrollment rates of persons 18 to 24 years old than are the OE figures which include

persons over age 34. There have been significant shifts in enrollment rates for men of draft age since 1964; enrollment rates increased between 1964 and 1966 and decreased between 1967 and 1970.

The 1969 CPS estimate of part-time undergraduate degree-credit enrollment was 64 percent lower than the OE estimate whereas the CPS estimate of full-time enrollment was 6 percent higher (table 4). One possible reason for the difference between the CPS and OE data on part-time enrollment may be the CPS questionnaire format. Several questions relating to major activity and employment status are asked prior to the question on school enrollment in the CPS and this may lead some persons who are attending school part-time, but working full-time, to respond "no" when asked if they are attending or enrolled in school. If the CPS question asked if the persons were enrolled or attending school either part-time or full-time, the CPS might uncover more persons attending college on a part-time basis. Another reason is coverage. The larger number of part-time students counted by OE may be due to the restricted age limit of the CPS, which is cut off at age 34.

#### Control of School

There was a considerable amount of variation between the Census and the CPS measurement of level of enrollment in public and private schools (table 5).

At the nursery school level, there were more children enrolled in both public and private schools in the Census than in the CPS. In public kindergartens there were 138,000 fewer children enrolled in the Census than in the CPS and 114,000 fewer children enrolled in private kindergartens in the Census than in the CPS. (One standard error on the CPS estimate would be around 17,000 persons). The proportion of all nursery school pupils who were in private schools was about the same.

At the elementary school level, the Census and the CPS data both show the same proportion of elementary school pupils enrolled in private schools--11.5 percent in the Census and 11.7 percent in the CPS. The Census data show fewer children enrolled in parochial elementary schools (in the Census this would include all children in any school supported by a religious organization) than the Official Catholic Directory shows enrolled in Catholic elementary schools in the fall of 1969. The Census shows 3.4 million children enrolled in parochial elementary schools (which would include Catholic and other church-supported schools) whereas the Official Catholic Directory shows 3.7 million children enrolled in Catholic elementary schools in the fall of 1969. The Census figure on the percent of private elementary school children enrolled in parochial schools is lower than the Office of Education estimate for the fall of 1968. (OE did not collect similar data in the fall of 1969). In the Census, 88 percent of the students enrolled in private elementary schools were in parochial schools as compared with 95 percent of the students included in the Office of Education survey. The Office of Education pro-

portion might be somewhat high, since they obtained more complete coverage of the Catholic parochial schools than of the secular private schools. And the Census estimate may be low, if some students enrolled in private Catholic schools not under the control of the parish and some students enrolled in non-Catholic but church-supported schools classified themselves as enrolled in "other private" schools rather than in parochial schools.

At the high school level, there were fewer students enrolled in public schools but more students enrolled in private schools in the Census than in the CPS. The 1960 Census also showed more persons enrolled in private high schools than did the October 1959 CPS, but the increase was only 3 percent as compared with the 23 percent increase between the October 1969 CPS and the 1970 Census. (The 1960 Census also showed more persons enrolled in public high schools than did the 1959 CPS).

Preliminary Office of Education data for the fall of 1970 show 1.2 million students enrolled in private high schools (grades 9 to 12) as compared with 1.4 million students in the 1970 Census. It has been suggested that the opening of private academies in some States after the school year began may have increased private school enrollment between the October 1969 CPS and the April 1970 Census. However, the CPS data for October 1970 show still fewer students enrolled in private high schools than in October 1969, as the decline in private school enrollment which began in 1966 apparently continued. It is possible that the Census residence rule which counted students living away from home at a private boarding school while attending school as a part of their parental household may have led to some double counting of these students, if the instruction not to count these students at their schools was not completely adhered to.

The Census data on enrollment in parochial high schools are roughly comparable with the data in the Official Catholic Directory on enrollment in Catholic high schools in the fall of 1969. The Census shows 1.0 million students enrolled in parochial high schools and the Official Catholic Directory shows 1.1 million enrolled in Catholic high schools. The Catholic high school enrollment was comprised of 667,000 students enrolled in schools under the control of the parish or diocese and 387,000 enrolled in schools under private Catholic control. Except for attrition between semesters, one would expect more students to be enrolled in parochial schools in the Census than just the number enrolled in Catholic schools, since the Census parochial definition (which was read by enumerators, but not respondents) included any private schools controlled or supported primarily by a religious organization. The New Haven pretest of the 1970 Census questions indicated that children enrolled in Catholic schools, whether under parish or private control, were being classified as enrolled in parochial schools. The comparability of Census data with data from the Official Catholic Directory appears to indicate that, in general, they were so classified in the Census. One surprising finding is the relatively low proportion of private high school enrollees in the Census who were in parochial (church-controlled or supported)

schools when compared with the Office of Education data for the fall of 1968. In the Census, only 70 percent of the students enrolled in private high schools were in parochial schools as compared with 88 percent of the students included in the Office of Education survey in 1968. The Office of Education proportion might be high, since they obtained more complete coverage of Catholic and other church-related schools than of secular private high schools. On the other hand, the category "parochial" may not have been reported for some students enrolled in private Catholic schools, that is, those not under the control of the parish; moreover, the category might not have been reported for students enrolled in schools supported by non-Catholic religions who may have thought that "parochial" referred only to Catholic schools. In future censuses and surveys this category should be fully explained in the instructions provided to the respondents and, perhaps, the wording of the category should be changed to read "parochial and other church-related schools" or just "church-related schools".

At the college level, there were fewer students enrolled in public colleges and more students enrolled in private colleges in the Census than in the CPS. In public colleges, there were 813,000 fewer students enrolled in the Census than in the CPS--a 15 percent difference. (One standard error on the CPS estimate is around 70,000 persons). Assuming some attrition, this may not be an unreasonable change. But in private colleges, there were 345,000 more students enrolled in the Census than in the CPS--a 17 percent increase. (One standard error on the CPS estimate is around 45,000). It was suggested in the 1960 Census Monograph, Education of the American Population, by Folger and Nam, that the students in college--a larger proportion of whom report for themselves in the Census than in the CPS--may make a better determination of the con-

trol of their colleges in the Census than their parents do in the CPS. This explanation was buttressed with a comparison of Census, CPS, and Office of Education data which showed a similar percentage of college students enrolled in private colleges in the Census and Office of Education data, but a smaller percentage in the CPS data. However, the 1970 Census, CPS, and Office of Education comparison does not support continuation of this reasoning. The CPS and OE data show approximately the same proportion of students in private colleges, around 27 percent, whereas the Census shows 34 percent in private colleges. The data in the 1970 Census and 1960 Census are consistent in that both showed a larger proportion of college students in private colleges than did the preceding CPS. Apparently, self-reporting of control of school varies significantly.

### Conclusion

The 1970 Census data on school enrollment appear to be valid and reliable. The major unaccountable differences are the larger number of students enrolled in private high schools and colleges in the Census than in the CPS, and the relatively low proportion of private high school students enrolled in parochial schools in the Census when compared with Office of Education data. It may be that the Census data on parochial school enrollment in the Census relate primarily to Catholic school enrollment and that students in other church-related schools are included in the "other private" category. The CPS data and OE data also are reasonably comparable with the major difference being the lower number of part-time undergraduate students in the CPS. Because of different collection methods and dates, the Census data, the CPS data, and the Office of Education data should not be facsimiles of each other, but should approximate each other, and they appear to do this reasonably well.

Table 1.--SCHOOL ENROLLMENT OF PERSONS 3 TO 34 YEARS OLD BY LEVEL OF SCHOOL  
IN THE 1970 CENSUS AND THE OCTOBER 1969 CURRENT POPULATION SURVEY  
(Numbers in thousands. CPS data for civilian noninstitutional population)

Level and control of school	Census April 1970	CPS October 1969	Difference	
			Number	Percent
Total, 3 to 34 years old.....	107,983	105,145	2,838	2.7
Enrolled in school.....	58,635	59,913	-1,278	-2.1
Nursery school.....	954	860	94	10.9
Kindergarten.....	3,024	3,276	-252	-7.7
Elementary school (1 to 8 years).....	33,210	33,788	-578	-1.7
High school (1 to 4 years).....	14,481	14,553	-72	0.5
College.....	6,966	7,435	-469	-6.3
Not enrolled in school.....	49,348	45,232	4,116	9.1

Note: Minus sign denotes a larger CPS figure.

Table 2.--COLLEGE ENROLLMENT BY LEVEL IN CURRENT POPULATION SURVEY AND IN  
THE OFFICE OF EDUCATION SURVEYS: 1967 TO 1969

(Numbers in thousands. CPS data for civilian noninstitutional population)

College enrollment	CPS October <sup>1/</sup>	Office of Education <sup>2/</sup>	Difference	
			Number	Percent
Total, undergraduate enrollment				
1967.....	5,437	5,653	-216	-4.0
1968.....	5,858	6,101	-243	-4.1
1969.....	6,296	6,656	360	5.7
1970.....	6,273	7,020	-747	-11.9
Total, graduate enrollment <sup>2/</sup>				
1967.....	963	753	210	21.8
1968.....	944	797	147	15.6
1969.....	1,138	828	311	27.3
1970.....	1,140	900	240	21.1

<sup>1/</sup> Graduate enrollment is defined as enrolled in the 5th year of college or higher.

<sup>2/</sup> Estimated resident graduate enrollment. About 130,000 in 1969 and 1970 were extension graduate students, Projections of Educational Statistics to 1980-81, U.S.O.E., National Center for Education Statistics, 1971 edition, table 18.

Note: Minus sign denotes larger OE figure.

Table 3.--COLLEGE ENROLLMENT IN THE CURRENT POPULATION SURVEY AND OFFICE OF  
EDUCATION SURVEY: 1960 TO 1970

(Numbers in thousands)

	College enrollment			Full-time college enrollment		
	OE <sup>1/</sup>	Census	Census - OE	OE <sup>1/</sup>	Census	Census - OE
1960.....	3,583	3,570	-13	2,466	2,681	215
1961.....	3,861	3,731	-130	2,714	2,902	188
1962.....	4,175	4,208	33	2,902	3,237	335
1963.....	4,495	4,336	-159	3,068	3,260	192
1964.....	4,950	4,643	-307	3,418	3,556	138
1965.....	5,526	5,675	149	3,910	4,414	504
1966.....	5,928	6,085	157	4,225	4,847	622
1967.....	6,406	6,401	-5	4,556	4,976	420
1968.....	6,928	6,801	-127	4,937	5,357	420
1969.....	7,484	7,435	-49	5,254	5,810	556
1970.....	7,920	7,413	-507	5,489	5,763	274

<sup>1/</sup> Fall degree-credit enrollment.

Table 4.--GRADUATE AND UNDERGRADUATE COLLEGE ENROLLMENT IN THE CURRENT  
POPULATION SURVEY AND OFFICE OF EDUCATION SURVEYS:  
1967 TO 1969

(Numbers in thousands. CPS data for civilian noninstitutional  
population under 35 )

Year and full-time part-time attendance	CPS October	Office of Education	Difference	
			Number	Percent
Undergraduate				
Part-time				
1967.....	952	1,414	-462	-48.5
1968.....	994	1,496	-502	-50.5
1969.....	1,077	1,766	-492	-64.0
1970.....	1,066	1,910	-844	-79.2
Full-time				
1967.....	4,485	4,239	246	5.5
1968.....	4,864	4,606	258	5.3
1969.....	5,219	4,890	329	6.3
1970.....	5,207	5,110	97	1.9
Graduate				
Part-time				
1967.....	472	436	36	7.6
1968.....	451	455	-4	-0.9
1969.....	545	464	81	14.9
1970.....	585	521	64	10.9
Full-time				
1967.....	491	317	174	35.4
1968.....	493	342	151	30.6
1969.....	593	364	229	38.6
1970.....	555	379	176	31.7

See notes on table 2.

Table 5.--SCHOOL ENROLLMENT OF PERSONS 3 TO 34 YEARS OLD BY LEVEL AND CONTROL  
IN THE 1970 CENSUS AND THE OCTOBER 1969 CURRENT POPULATION SURVEY  
(Numbers in thousands. CPS data for civilian noninstitutional population)

Level and control of school	Census April 1970	CPS October 1969	Percent	
			Census	CPS
Nursery school.....			100.0	100.0
Public.....	303	245	31.8	28.5
Private.....	650	615	68.1	71.5
Kindergarten.....			100.0	100.0
Public.....	2,544	2,682	84.1	81.9
Private.....	480	594	15.9	18.1
Elementary school (1 to 8 years).....			100.0	100.0
Public.....	29,375	29,825	88.5	88.3
Private.....	3,835	3,964	11.5	11.7
High school (1 to 4 years).....			100.0	100.0
Public.....	13,063	13,400	90.2	92.1
Private.....	1,417	1,153	9.8	7.9
College.....			100.0	100.0
Public.....	4,626	5,439	66.4	73.2
Private.....	2,340	1,995	33.6	26.8

Note: Minus sign denotes a larger CPS figure.

Table 6.--PERCENT OF COLLEGE STUDENTS IN PUBLIC AND PRIVATE COLLEGES IN THE  
1960 AND 1970 CENSUS, THE OCTOBER 1959 AND 1969 CPS, AND IN THE  
OFFICE OF EDUCATION FALL 1959 AND 1969 SURVEYS

Control of College	Census April 1970	CPS October 1969	Office of Education Fall 1969 1/	Census April 1960	CPS October 1959	Office of Education Fall 1959 1/
Total enrolled.....	100.0	100.0	100.0	100.0	100.0	100.0
Public.....	66.4	73.2	72.4	58.9	63.5	58.9
Private.....	33.6	26.8	27.6	41.1	36.5	41.4

1/ Degree-credit enrollment.